

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331998-830

Luminaire Tested: **S123DIP-S775D1195U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331998-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6853.3 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

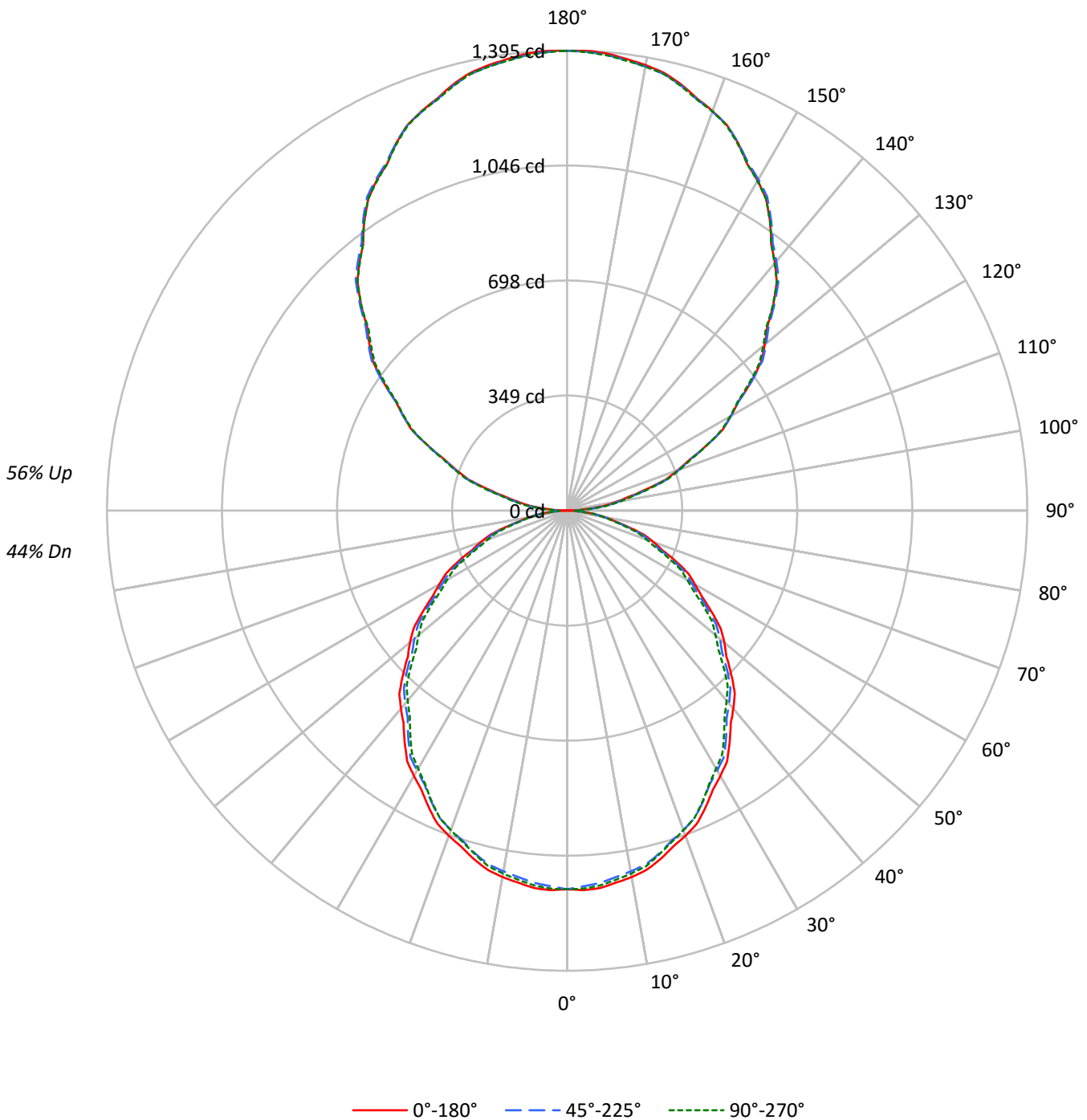
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				44
1	96	92	88	85	88	84	81	78	70	67	65	57	55	53	44	43	42				37	
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36				31	
3	80	71	63	57	73	65	58	53	54	49	45	44	40	38	35	32	30				26	
4	73	62	55	49	67	57	50	45	48	43	39	39	35	32	31	28	26				22	
5	67	55	47	41	61	51	44	39	43	37	33	35	31	28	28	25	23				19	
6	62	50	42	36	56	46	39	34	38	33	29	32	28	24	25	22	20				17	
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18				15	
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16				13	
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14				12	
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13				11	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12355	12355	12355
5°	12413	12241	12327
10°	12329	12136	12211
15°	12186	11999	12021
20°	12016	11802	11813
25°	11792	11569	11545
30°	11543	11309	11225
35°	11284	11037	10893
40°	11011	10732	10568
45°	10712	10456	10201
50°	10412	10114	9833
55°	10021	9760	9466
60°	9623	9347	9052
65°	9276	8899	8621
70°	8759	8387	8013
75°	8006	7719	7390
80°	7221	6912	6856
85°	6336	6101	5854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	1.6
10°-20°	305.3	4.5
20°-30°	451.0	6.6
30°-40°	526.8	7.7
40°-50°	529.6	7.7
50°-60°	465.2	6.8
60°-70°	346.6	5.1
70°-80°	197.5	2.9
80°-90°	60.8	0.9
90°-100°	90.8	1.3
100°-110°	271.8	4.0
110°-120°	462.3	6.7
120°-130°	608.1	8.9
130°-140°	683.5	10.0
140°-150°	671.9	9.8
150°-160°	565.6	8.3
160°-170°	376.5	5.5
170°-180°	131.8	1.9
0°-30°	864.4	12.6
0°-40°	1391.1	20.3
0°-60°	2385.9	34.8
0°-90°	2990.8	43.6
90°-120°	825.0	12.0
90°-150°	2788.5	40.7
90°-180°	3863.0	56.4
0°-180°	6853.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1149	1143	1133	1142	1141	109
15°	1094	1089	1077	1084	1079	308
25°	993	987	974	975	972	457
35°	859	852	840	834	829	537
45°	704	699	687	675	670	543
55°	534	532	520	510	504	478
65°	364	359	349	342	338	359
75°	192	189	186	181	178	206
85°	51	50	49	48	47	56
90°	1	12	26	31	33	7
95°	65	72	81	85	85	73
105°	246	249	258	259	261	264
115°	465	468	467	468	467	460
125°	681	684	682	678	674	607
135°	884	890	889	885	883	681
145°	1072	1074	1078	1076	1072	669
155°	1228	1228	1229	1232	1225	565
165°	1337	1334	1334	1340	1333	377
175°	1391	1387	1386	1392	1385	132
180°	1394	1394	1394	1394	1394	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1151.7	1151.0	1150.4	1149.6	1149.0	1147.6	1145.7	1143.8	1141.8	1139.9	1141.6
5°	1148.8	1147.6	1146.6	1145.5	1144.3	1142.6	1140.2	1137.8	1135.4	1132.9	1135.2
7.5°	1137.6	1136.4	1135.3	1134.3	1133.1	1131.3	1128.8	1126.3	1123.8	1121.3	1123.3
10°	1128.0	1126.9	1125.9	1124.7	1123.7	1121.7	1118.8	1116.0	1113.1	1110.3	1112.3
12.5°	1115.4	1114.5	1113.6	1112.7	1111.7	1109.9	1107.3	1104.6	1101.9	1099.2	1100.7
15°	1093.5	1092.6	1091.7	1090.9	1090.0	1088.2	1085.2	1082.4	1079.6	1076.8	1078.5
17.5°	1068.0	1066.9	1065.7	1064.6	1063.5	1061.5	1058.7	1055.7	1052.9	1050.1	1051.3
20°	1049.0	1047.7	1046.5	1045.2	1043.9	1041.7	1038.9	1036.0	1033.2	1030.3	1031.2
22.5°	1027.7	1026.4	1025.1	1023.8	1022.5	1020.4	1017.6	1014.7	1011.9	1009.0	1009.7
25°	992.9	991.6	990.2	988.9	987.6	985.5	982.6	979.8	976.9	974.1	974.3
27.5°	955.5	954.2	953.0	951.7	950.5	948.3	945.2	942.2	939.1	935.9	936.1
30°	928.7	927.6	926.5	925.4	924.3	922.2	919.2	916.1	913.0	909.9	909.9
32.5°	901.8	900.4	898.9	897.5	896.1	894.2	891.7	889.4	887.0	884.7	883.4
35°	858.7	857.3	856.0	854.7	853.4	851.3	848.4	845.6	842.7	839.9	838.6
37.5°	814.4	812.8	811.1	809.4	807.8	805.5	802.6	799.7	796.7	793.9	792.3
40°	783.6	782.3	781.0	779.7	778.4	776.2	773.1	770.1	766.9	763.8	762.1
42.5°	752.8	751.3	749.8	748.4	746.9	744.6	741.5	738.4	735.4	732.3	730.6
45°	703.7	702.8	701.9	701.1	700.1	698.3	695.4	692.6	689.8	686.9	684.3
47.5°	654.9	653.7	652.3	651.1	649.8	647.8	645.2	642.5	639.8	637.2	634.5
50°	621.8	620.7	619.5	618.5	617.4	615.4	612.6	609.7	606.8	604.0	601.6
52.5°	587.0	586.3	585.5	584.8	584.0	582.1	579.1	576.1	573.1	570.0	568.0
55°	534.0	533.7	533.5	533.3	533.0	531.5	528.7	525.8	522.9	520.1	517.7
57.5°	483.4	482.7	481.9	481.2	480.4	478.9	476.6	474.3	472.0	469.8	467.6
60°	447.0	446.9	446.7	446.4	446.2	444.8	442.1	439.5	436.9	434.2	432.3
62.5°	414.7	414.2	413.6	413.0	412.5	410.9	408.2	405.6	402.9	400.3	398.3
65°	364.2	363.1	361.9	360.9	359.8	358.2	355.9	353.7	351.6	349.4	347.6
67.5°	310.7	309.7	308.8	307.7	306.8	305.5	303.9	302.2	300.5	298.9	297.3
70°	278.3	277.0	275.7	274.4	273.1	271.7	270.4	269.1	267.8	266.5	264.9
72.5°	244.4	243.4	242.4	241.5	240.5	239.3	237.8	236.3	234.8	233.3	232.0
75°	192.5	191.5	190.7	189.8	189.0	188.1	187.5	186.8	186.2	185.6	184.5
77.5°	146.5	146.0	145.5	145.1	144.5	143.9	143.1	142.3	141.6	140.7	140.0
80°	116.5	115.8	115.2	114.5	113.9	113.3	112.8	112.4	112.0	111.5	111.3
82.5°	87.3	87.1	87.0	86.8	86.7	86.6	86.5	86.4	86.3	86.2	85.9
85°	51.3	50.9	50.4	50.0	49.6	49.4	49.4	49.4	49.4	49.4	48.9
87.5°	20.7	20.7	20.6	20.6	20.5	20.8	21.3	21.7	22.1	22.6	22.6
90°	1.1	3.5	5.9	8.4	10.8	13.7	16.8	20.0	23.1	26.3	27.2
92.5°	26.5	28.2	29.8	31.5	33.1	34.9	36.7	38.5	40.2	42.0	42.8
95°	64.7	66.4	68.1	69.7	71.4	73.2	75.2	77.1	79.1	81.1	82.0
97.5°	114.8	116.0	117.3	118.6	119.8	121.2	122.6	124.0	125.4	126.8	127.9
100°	148.9	150.4	151.8	153.4	154.8	156.1	157.3	158.5	159.8	161.0	161.7
102.5°	188.3	189.3	190.1	191.0	191.9	193.1	194.7	196.3	197.9	199.5	200.3
105°	246.4	246.9	247.4	247.9	248.4	249.7	251.8	254.1	256.3	258.4	258.4
107.5°	313.9	314.1	314.4	314.7	315.0	315.7	316.5	317.4	318.2	319.1	319.9
110°	355.9	356.4	356.8	357.4	357.9	358.4	358.8	359.3	359.8	360.3	361.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	399.7	400.0	400.3	400.6	400.9	401.1	401.1	401.2	401.3	401.4	402.7
115°	465.4	466.2	466.8	467.6	468.3	468.4	468.0	467.5	467.0	466.6	466.7
117.5°	531.6	532.1	532.5	533.0	533.5	533.5	532.8	532.2	531.6	530.9	530.8
120°	572.8	574.2	575.7	577.1	578.6	578.7	577.5	576.3	575.0	573.8	573.6
122.5°	615.7	616.7	617.8	618.9	620.0	620.2	619.5	618.9	618.3	617.6	617.0
125°	681.2	681.9	682.6	683.3	684.1	684.2	683.7	683.2	682.8	682.3	681.3
127.5°	741.6	743.2	744.7	746.3	747.8	748.4	747.8	747.2	746.8	746.2	744.9
130°	781.9	783.8	785.8	787.8	789.7	790.3	789.6	788.8	788.2	787.4	786.5
132.5°	822.2	824.2	826.1	828.0	830.0	830.8	830.2	829.6	829.1	828.6	827.4
135°	883.7	885.2	886.6	888.2	889.6	890.2	889.9	889.8	889.5	889.2	888.3
137.5°	940.8	941.9	943.1	944.3	945.6	946.5	947.2	947.7	948.4	949.0	948.0
140°	980.1	981.4	982.6	983.8	985.0	985.7	986.0	986.2	986.5	986.7	986.5
142.5°	1016.1	1017.3	1018.5	1019.7	1021.0	1021.7	1022.2	1022.7	1023.0	1023.5	1023.2
145°	1072.1	1072.6	1073.1	1073.6	1074.0	1074.7	1075.4	1076.1	1076.9	1077.6	1077.3
147.5°	1121.2	1122.1	1122.9	1123.8	1124.7	1125.5	1126.1	1126.8	1127.5	1128.2	1128.2
150°	1155.4	1155.8	1156.3	1156.8	1157.3	1157.8	1158.3	1158.8	1159.2	1159.7	1159.7
152.5°	1183.4	1184.1	1184.8	1185.4	1186.1	1186.6	1186.8	1187.2	1187.5	1187.8	1188.2
155°	1227.7	1227.7	1227.7	1227.7	1227.7	1227.8	1228.0	1228.2	1228.5	1228.7	1229.7
157.5°	1265.3	1265.0	1264.7	1264.4	1264.1	1264.0	1264.3	1264.5	1264.7	1264.9	1265.9
160°	1288.9	1288.5	1288.0	1287.5	1287.0	1286.8	1286.8	1286.8	1286.8	1286.8	1288.0
162.5°	1309.9	1309.3	1308.6	1308.0	1307.3	1307.0	1307.2	1307.4	1307.6	1307.8	1309.0
165°	1337.2	1336.4	1335.7	1334.9	1334.3	1333.9	1333.9	1333.9	1333.9	1333.9	1335.3
167.5°	1358.9	1357.8	1356.9	1355.9	1354.9	1354.5	1354.7	1354.9	1355.1	1355.3	1356.8
170°	1371.1	1370.1	1369.1	1368.2	1367.2	1366.7	1366.7	1366.7	1366.7	1366.7	1368.4
172.5°	1380.7	1379.8	1378.8	1377.8	1376.9	1376.4	1376.4	1376.4	1376.4	1376.4	1377.9
175°	1390.8	1389.9	1388.8	1387.9	1387.0	1386.4	1386.4	1386.4	1386.4	1386.4	1387.9
177.5°	1395.0	1394.2	1393.5	1392.6	1391.9	1391.5	1391.5	1391.5	1391.5	1391.5	1392.6
180°	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1143.4	1145.2	1146.9	1147.7	1147.5	1147.4	1147.2	1147.0
5°	1137.4	1139.5	1141.8	1142.6	1142.2	1141.8	1141.3	1140.9
7.5°	1125.3	1127.3	1129.3	1130.1	1129.8	1129.5	1129.3	1129.1
10°	1114.3	1116.2	1118.1	1119.0	1118.5	1118.0	1117.7	1117.2
12.5°	1102.1	1103.5	1105.0	1105.6	1105.3	1105.0	1104.8	1104.6
15°	1080.2	1081.9	1083.7	1083.9	1082.6	1081.3	1080.1	1078.7
17.5°	1052.5	1053.8	1055.0	1055.4	1054.9	1054.4	1054.0	1053.5
20°	1032.1	1032.9	1033.9	1034.0	1033.3	1032.6	1032.0	1031.3
22.5°	1010.4	1011.2	1011.8	1011.7	1011.0	1010.1	1009.3	1008.4
25°	974.5	974.8	975.0	974.8	974.1	973.5	972.8	972.1
27.5°	936.3	936.5	936.7	936.3	935.6	934.7	933.9	933.0
30°	909.9	909.9	909.9	909.2	907.7	906.1	904.6	903.1
32.5°	882.2	881.0	879.8	878.7	877.9	877.0	876.2	875.4
35°	837.3	835.9	834.6	833.4	832.3	831.2	830.1	829.0
37.5°	790.7	789.1	787.6	786.5	785.7	785.0	784.3	783.6
40°	760.3	758.7	756.9	755.5	754.7	753.8	752.9	752.1
42.5°	728.8	727.0	725.3	724.0	723.1	722.2	721.3	720.5
45°	681.6	679.0	676.4	674.5	673.4	672.3	671.2	670.1
47.5°	632.0	629.4	626.8	625.0	624.1	623.1	622.2	621.1
50°	599.2	596.7	594.4	592.5	591.2	589.8	588.5	587.2
52.5°	565.9	563.8	561.8	560.2	558.8	557.5	556.2	554.9
55°	515.3	512.8	510.5	508.7	507.6	506.5	505.4	504.4
57.5°	465.4	463.4	461.2	459.5	458.2	456.9	455.6	454.4
60°	430.3	428.3	426.3	424.8	423.7	422.6	421.5	420.5
62.5°	396.3	394.4	392.4	391.1	390.3	389.6	388.8	388.0
65°	345.8	344.1	342.3	341.1	340.4	339.8	339.1	338.5
67.5°	295.8	294.3	292.7	291.4	290.6	289.6	288.7	287.8
70°	263.4	261.8	260.3	259.0	257.9	256.8	255.7	254.6
72.5°	230.5	229.2	227.9	226.9	226.3	225.7	225.2	224.6
75°	183.3	182.3	181.2	180.3	179.6	179.0	178.3	177.7
77.5°	139.2	138.5	137.7	137.4	137.4	137.4	137.4	137.4
80°	111.1	110.8	110.7	110.6	110.6	110.6	110.6	110.6
82.5°	85.5	85.1	84.6	84.4	84.3	84.1	83.9	83.7
85°	48.4	48.1	47.6	47.4	47.4	47.4	47.4	47.4
87.5°	22.6	22.7	22.7	22.7	22.9	23.0	23.1	23.2
90°	28.3	29.2	30.2	30.9	31.4	31.9	32.3	32.9
92.5°	43.6	44.4	45.1	45.4	45.1	44.9	44.5	44.2
95°	82.9	84.0	84.9	85.4	85.4	85.4	85.4	85.4
97.5°	129.0	130.2	131.3	131.8	131.7	131.6	131.5	131.4
100°	162.4	163.2	163.9	164.5	165.0	165.5	166.0	166.5
102.5°	201.0	201.7	202.5	202.7	202.6	202.6	202.5	202.4
105°	258.4	258.4	258.4	258.7	259.2	259.7	260.1	260.6
107.5°	320.7	321.5	322.3	322.4	322.2	321.9	321.6	321.3
110°	362.2	363.3	364.2	364.4	363.9	363.4	363.0	362.5



TEST NUMBER: P331998-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	403.8	405.0	406.1	406.7	406.6	406.5	406.4	406.3
115°	467.0	467.2	467.5	467.5	467.2	467.0	466.7	466.6
117.5°	530.8	530.7	530.7	530.4	529.7	529.0	528.3	527.6
120°	573.3	573.2	572.9	572.5	572.0	571.6	571.1	570.5
122.5°	616.4	615.8	615.1	614.4	613.8	613.1	612.4	611.7
125°	680.3	679.4	678.3	677.4	676.5	675.4	674.5	673.5
127.5°	743.5	742.2	740.7	739.5	738.4	737.3	736.1	735.1
130°	785.4	784.5	783.5	782.1	780.4	778.7	777.0	775.3
132.5°	826.2	825.1	823.9	822.7	821.3	820.0	818.7	817.4
135°	887.3	886.3	885.3	884.6	884.1	883.6	883.2	882.7
137.5°	947.0	945.9	944.9	944.0	943.0	942.2	941.2	940.3
140°	986.2	986.0	985.7	984.8	983.1	981.4	979.7	978.0
142.5°	1023.0	1022.8	1022.6	1021.7	1020.4	1019.1	1017.9	1016.5
145°	1077.1	1076.9	1076.7	1076.0	1075.1	1074.0	1073.1	1072.1
147.5°	1128.2	1128.2	1128.2	1127.5	1126.0	1124.5	1123.0	1121.6
150°	1159.7	1159.7	1159.7	1159.0	1157.5	1156.1	1154.6	1153.2
152.5°	1188.5	1188.9	1189.3	1188.9	1187.6	1186.4	1185.1	1183.8
155°	1230.7	1231.6	1232.7	1232.3	1230.6	1228.9	1227.2	1225.4
157.5°	1266.9	1267.9	1268.9	1268.8	1267.4	1266.0	1264.7	1263.3
160°	1289.2	1290.4	1291.7	1291.8	1290.8	1289.8	1288.8	1287.9
162.5°	1310.2	1311.5	1312.7	1312.5	1310.9	1309.4	1307.8	1306.3
165°	1336.8	1338.2	1339.7	1339.5	1337.8	1336.1	1334.5	1332.8
167.5°	1358.3	1359.8	1361.3	1361.3	1359.8	1358.3	1356.8	1355.3
170°	1370.1	1371.9	1373.6	1373.6	1371.9	1370.1	1368.4	1366.7
172.5°	1379.4	1380.9	1382.4	1382.3	1380.5	1378.8	1377.1	1375.5
175°	1389.3	1390.8	1392.2	1392.1	1390.4	1388.7	1387.0	1385.3
177.5°	1393.8	1395.0	1396.1	1396.0	1394.7	1393.3	1391.9	1390.6
180°	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1

(END OF REPORT)